

***Scholarly Communication and the Changing Landscape of Scholarship***

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This presentation will cover the changes that are occurring within scholarship, the relationship they have with scholarly communication, and the role of libraries in this evolving landscape. It will discuss initiatives that the University of Washington (UW) libraries is pursuing with regard to scholarly communication and support models for new scholarship, and will talk about how the UW is creating programs to combine the new kinds of scholarship with the new concepts, strategies, models, and technologies that have developed.

The emergence of new forms of scholarship and strategies such as institutional repositories can be seen as falling under the larger umbrella of scholarly communication, which will be an overarching theme of this presentation.

**Scholarly environment**

As we all know, scholarship has begun to expand quite rapidly - there's more being produced all the time. Research and publishing are growing exponentially and libraries can barely scratch the surface in their collecting efforts.

Scholarship is evolving into new forms and scholars are producing works we wouldn't have recognized ten years ago. In some cases it is heavily interwoven with and inseparable from multi-media, images, data files, simulations and the like. Some scholars are even researching and teaching about the evolving cyberculture and aspects of born digital materials. Of course many are also creating works that are digital versions of scholarship with which we are more familiar, such as journals or individual articles.

More often than not scholars who are creating new scholarship are placing their investment of time and resources in the creative act without necessarily thinking



about the implications their work has for libraries, the scholarly record, or preserving their work for future generations.

### **Digital scholarship**

Although there are different rates of growth of digital resources among subject disciplines, increasingly scholars in all areas are working intensively in digital formats creating new works, new research and innovative teaching material. This is what one may call digital scholarship. Digital scholarship can be defined as:

- Knowledge or art that is created, produced, analyzed, distributed and/or displayed in a digital medium for the purpose of research or teaching;
- creation of digital technology, tools and services to solve problems in scholarship; or
- the study and analysis of digital resources and culture

Much of this scholarship is never intended to be formally published nor is it meant to address directly the problems that we are experiencing with the current system of scholarly communication. Though these new kinds of scholarly data, presentations and distribution represent a shift away from publishing and the kind of scholarship that we have traditionally collected and preserved in libraries, they are a natural evolution and adaptation of digital technology to scholarly work.<sup>1</sup>

Digital scholarship is being produced regularly through programs such as the Institute for Advanced Technology in the Humanities at the University of Virginia<sup>2</sup> and the California Digital Library's eScholarship program.<sup>3</sup> Examples also include Internet sites developed and managed by scholars such as the PoliticalWeb.Info.<sup>4</sup>

### **Endangered scholarship**

Because digital scholarship appears to be different from traditional forms of scholarship, it faces many hurdles and questions in the academy.

- Will digital scholarship be valued and accepted for promotion and tenure?
- How will acceptance vary among disciplines?
- What role will peer review have in evaluating and validating this new scholarship?
- What are the new measures of authority and quality?
- Will there be other rewards for engaging in innovative projects and changing the landscape of traditional scholarly communication?
- Without a long term support plan, are valuable intellectual assets in danger of disappearing from the scholarly record?

If we agree that something needs to be done to maintain and make available these endangered works, how can libraries play this role with new scholarship?

### **Digital scholarship, libraries and scholarly communication**

Digital scholarship falls within the mission of libraries to support and preserve the products of scholarship. Librarians need to acknowledge developments and changes in scholarship, the growing importance of digital scholarship in some fields, and the increasing recognition of its value to overall scholarship. Librarians also need to realize that for some scholarship it makes no sense to do it any way other than digitally. It is inevitable that the shift to digital scholarship will happen more quickly where it will be fully accepted and rewarded. And clearly this is the future of much of the substance of scholarly communication. At the University of Washington Libraries our Digital Initiatives program has been working in this area with faculty on request, primarily dealing with text and images, but in some cases with more complex data.

The University of Washington has also had an active program in support of change in scholarly communication and the Libraries has done the typical



activities such as hold forums, develop a website, conduct one on one discussions with faculty and other campus personnel, present briefings at department meetings and new faculty orientation sessions, and write articles for the library newsletter. The challenges of supporting change include engaging faculty and keeping their attention; making scholarly communication a campus issue, not a library issue; reconciling visions of different groups and moving in concert; and keeping conversations relevant and fresh. Often our interactions and communications are viable means to tell others what we want them to hear about scholarly communication, but not to find out what they want to tell us. I will return to this point later.

### **Digital libraries**

The next area to discuss is that of digital libraries and how they relate to scholarly communication and digital scholarship. The phrase "digital libraries" means different things to different people. One could say that it has taken at least four paths: electronic publishing, computer science research, electronic text centers and digitizing projects, and library-based services and projects devoted to reformatting of collections. Ultimately, libraries should be knitting together these digital library threads and including digital scholarship. We need to place our digital library efforts firmly within the context of evolving scholarship, the mission of libraries, and our support for scholarly communication. If we do that we can cast digital library efforts into two goals.

The first goal would be being promoting and supporting scholarship in a digital environment. This goal requires that libraries enable new models and forms of scholarship, expand access to both the old and the new forms, support methods that can create change in scholarly communication, and help prepare and support a new generation of scholars. A second goal would be to take library services to a new level. To do that we need to exponentially increase knowledge

discovery and use, extend our services outside the walls of the library, find and serve new audiences, and finally, preserve and study the "born digital."

The UW Libraries has been implementing several approaches to develop and support this integrated vision of digital libraries. One of the things we did several years ago was to change the charge of our Digital Initiatives program by establishing new goals to support change models in scholarly communication and new forms of scholarship, to explore new ways to support, capture, disseminate and preserve digital scholarship; and to foster experimentation and specialized scholarly projects. That step enabled us to move forward with concepts that are now embraced by the term institutional repository.

### **Institutional repositories**

What is an institutional repository? At its most basic level it is a place where the digital content of our institutions can be stored, found and preserved. The recent national movement on this front began with the recognition that we need a place to archive, manage and service the important digital assets and scholarship being created on our campuses.

An institutional repository exists for locally created content of an institution and relies on and assumes commitment of the institution for the long term. Although its purpose is to serve locally created content rather than a subject base, it is not incompatible with having discipline based collections within the repository or derived from the repository.

One could ask, why a repository? As the quantity of born digital scholarship is increasing, universities are faced with the enormous challenge of how to manage it over time. Some digital material should be saved as part of the permanent scholarly record and some must be saved due to statutory requirement as part of our institution's archives. Institutional repositories can also lead to new ways to

support evolving scholarship by providing a place for new kinds of scholarly communication, publishing, research and teaching, and by promoting innovation and experimentation.

The direction established by having an institutional repository is a change for libraries, which have collected the research output of the faculty, staff and students in very prescribed and well known forms, such as published books and articles, microfilm, theses and dissertations, and faculty papers. Increasingly teaching and research materials are created, integrated and used digitally. If we want to preserve these new kinds of scholarship, we need a means and place to do so. If done right, institutional repositories can help communities of scholars share their materials with each other across institutional boundaries, in ways that expand on traditional scholarly publishing models.

Moreover, institutional repositories could also keep our scholarly materials in our hands, and will give us the mandate to preserve the stuff of our institution for our institutions and our future scholars. One can hope that this will also shift power from publishers back to scholars and the academy.

### **Advantages, disadvantages and barriers**

In many ways the advantages mirror those that libraries offer their institutions already. An institutional repository ensures long term viability and access to an entire corpus of the institution, promotes sharing of resources, and makes preservation a high priority. It provides organization and description, creates exposure, and promotes discovery of important materials. Furthermore, it has the potential to create efficiency for the organization and the individual scholar.

There are also, of course, potential disadvantages. Some scholars may prefer to support a subject repository since it identifies more with their discipline or scholarly society than their institution. Some researchers aren't ready to share their stuff,



and may resist contributing their time and their material to a repository. Many libraries are going to feel overwhelmed by the commitment to archiving everything and dealing with the support issues that that commitment raises. Institutional repositories are hard to get off the ground and failure may endanger the contents of a repository. The scholarly community risks losing unique resources if there is not have careful planning and adequate resources, however, the attempt to have an institutional repository still may be better than what we have now, which is no plan or system at all.

Many potential barriers may prevent libraries from supporting digital scholarship and institutional repositories, including competition for resources, competition for time and attention, and ambiguity of roles on campus, and in the library, for managing digital assets. Developing support on campus is critical - the need and urgency or the role of the library in this endeavor may not be readily acknowledged. People and units that should be consulted are many and could include the graduate school, academic computing, various centers and institutes, programs, departments, and colleges. In the library, one needs to sort out the role of the archives, collection development, systems, the digital library program, or other departments.

The concept of the institutional repository has received criticism for its limitations and it sometimes posited that discipline based initiatives are the better way to go. Its not an either or proposition. Institutional repositories will likely coexist with or provide content or preservation services for subject portals, repositories, and other similar approaches intended to support discipline based scholarship. They may not be the best way to capture and preserve all material but serve at the very least as a jumping off point for illuminating the challenges inherent in the new ways that scholars are working and for jump starting discussions at our institutions about the life cycle support of scholarship, including the problems with

scholarly communication as it now stands. The attempt to start an institutional repository can focus attention on the problem of preserving new scholarship and can get the institution and its scholars thinking about the value and the future of their digital assets.

### **Implementing an institutional repository**

To develop an institutional repository, at the very least one needs to do these things:

- Find good models and tools
- Review current service concepts and applications to see what can work in conjunction with a repository
- Look for partners and content on campus for experimentation and pilot projects
- Examine rights issues and not make these a barrier to participation
- Start addressing archiving and preservation obligations for these complex resources
- Identify resources and funding.

The UW libraries chose to work with DSpace as a model and tool set for building an institutional repository because it promises to provide the stable long-term preservation mechanisms required to archive the digital assets of our institution. Its aims jive with the goals of developing sound digital libraries and institutional repositories by capturing, distributing and preserving digital scholarship. Its model provides a solid, secure basis for developing additional digital library services.

DSpace seeks to provide core services that will meet the basic needs of many with basic functionality. It is also open source and employs a federated model to distribute the load of development, policy making, and creation of best practices.





Its heart will be preservation and durability (the "D" in DSpace stands for durable, not digital) and it will be a reliable and trusted repository and service to support the life cycle of scholarship.

Lastly, it is based in communities and presupposes that they will be supported by organizational or administrative structures, not ad hoc groups that come together on a temporary basis. Communities can be departments, colleges, centers, institutes, and so on, but they aren't individuals. The idea behind communities is to secure institutional commitment beyond individual faculty member interests or careers. Policy development is made in conjunction with the communities and they share in the responsibility to set their policies for peer review, selection, retention, and the like.

Although on the technical level DSpace is dealing most effectively with textual material at the moment, it will support anything digital such as datasets, websites, software, course materials, audio/visual material and more. The UW libraries is facilitating conversations between DSpace and a UW Computing & Communications project called the Digital Well which can house large chunks of data and support streaming video and may be able to expand the current capabilities of the DSpace architecture.

We are working on three DSpace communities at the moment. We have placed in DSpace the image files of the Early Buddhist Manuscript Project based in the Jackson School of International Studies, we are developing a strategy to manage websites from faculty in the Department of Communication, and we are talking with the Information School about building a joint community.

### **The scholars view**

While we need to continue to share our visions of a sustainable and successful system of scholarly communication, and also need to tune our ears to the



language of our scholars and listen to what they have to say about their needs and their vision. The UW Libraries took yet another step to help determine what directions we need to take and to find out what our scholars want.

In September 2001, Don Waters, program officer for scholarly communication at the Andrew W. Mellon Foundation, posed this question to a group of new library directors: "How can libraries be more effectively positioned in scholarly life at a time when there is so much flux?" The UW Libraries answered this provocative question with a proposal to the Mellon Foundation to host a retreat and begin a planning process for the university.

We were honored to receive funding from the Mellon Foundation and were able to hold the retreat in March of 2003. The purpose of the retreat could be summed up in this question: "What are scholars' needs and wants with regard to digital scholarship, collections and technology, and what strategies should the university and the libraries take to advance such scholarship and learning?"

The retreat was designed to provide scholars and planners with an opportunity to engage deeply in the exploration and visioning about digital scholarship and new models of support, not for the libraries to tell the faculty what we wanted them to hear. A faculty planning group helped shape the retreat content and structure. The Libraries built a web site devoted to the retreat that included resources and links to other initiatives of which we were aware. We provided other background material such as short articles for participants to scan ahead of time. We planned to bring together in one place scholars in the humanities and social sciences along with key campus organizations, such as Computing and Communications, the UW Press, and UW museums to hear what was said and participate in creating a shared vision. The provost and the president hosted a pre-retreat reception to give the participants a chance to meet each other and to deliver short but inspiring speeches.

Prior to the retreat, participants were asked to complete a survey on what they had been doing in the digital scholarship arena, their insights on barriers and needs, and a list of the projects which they considered to be digital scholarship. One of the faculty planners designed the survey from the viewpoint of a faculty member. The results were made available via the website and comprise an informal registry of our institutional work.

At the retreat, the tone was established with plenary sessions that included information about the current challenges of digital scholarship, along with recent opportunities and initiatives under way. Some initial questions were posed for participants to ponder, such as:

- What are you creating and how? Where are you keeping it? How can others find it?
- Who needs to use it? How will they use it? How will they find it?
- Can your work be a model for others?
- Will the promotion and tenure system embrace your scholarship?
- How will you preserve it as a scholarly work and in the scholarly record and for how long?

Over the two days, participants worked in small groups of 6-8 individuals to discuss these questions and more, including:

- What is driving digital scholarship?
- What are the current constraints and inhibitors?
- What is your vision for digital scholarship and models of academic support?
- What needs to be done to attain the emerging vision?
- What will move us along as an institution and as individual scholars toward next generation scholarship?
- What should the UW libraries be doing?
- Where should the UW invest resources and new funds?



Participants were brought together to discuss the results of their small group conversations - to synthesize, evaluate, respond to each other, and share more ideas. The larger sessions were used to flesh out conceptual models of support.

### **Outcomes from the retreat**

There were many anticipated and unanticipated outcomes from the retreat and the pre-retreat activities. Here are a few highlights:

- Many faculty didn't know each other and were unaware of the extent and scope of activities at the UW. They discovered each other and the diverse nature of activities at our institution. They found they shared models and similarity of efforts across disciplines.
- Faculty confirmed that they greatly value the libraries as a broker and knowledgeable player, able to bring people together because librarians know what people are doing all over campus. The Libraries was perceived as a valued partner in research and teaching, and faculty appreciated the library's role in helping to create and preserve their work.
- Several models were developed for support of digital scholarship, and included services ranging from tool building to preservation. Some participants went so far as to view digital scholarship as an emerging discipline worthy of study, not just a new way of working or just a practical or technical concern of scholarship.
- The scholars desired a registry of each other's work to invite collaboration and cross fertilization. They also thought it was important to move digital scholarship forward and increase activity - they wanted more support and recognition from administrators, along with a change in the rewards structure, to foster and support this work.



- The retreat encouraged more collaboration among potential partners such as the Libraries, the Information School, the Digital Well and the University of Washington Press.
- All attendees were willing to participate in future meetings, grant writing, or other activities that would move campus initiatives forward.

To quote one comment from among many,

"The digital scholarship initiative will bring (or at least help to bring) focus to an emerging need and opportunity to many scholars on campus who have been struggling individually with attempting to articulate and elucidate this area of study. Both the opportunity and challenges are enormous for making significant contributions in scholarship previously impossible without digital technology."

The retreat was deemed a great success by the participants. There were a number of reasons, among them are:

- **Support** - There was strong support from the Provost and President from the inception and their involvement in the pre-retreat reception lent enthusiasm to the undertaking. Funding from an outside foundation lent prestige to the event.
- **People** - Faculty did much of the program planning and identification of fellow participants. There was broad participation by a range of stakeholders, including graduate students. Librarians facilitated the lively discussions among the scholars but allowed them to drive much of the conversation. The planners also made sure that the retreat was about the faculty and their scholarship, not about the Libraries.
- **Structure** - A robust web site was created to facilitate planning and sharing of information. The structure of the retreat made it easy to participate and



allowed plenty of time for discussion, interaction and relaxation. Small groups were composed of people who did not know each other beforehand, which led to interesting synergisms and a mix of perspectives. Balance between plenary sessions, group reports and small group work kept conversations fresh and invigorating.

- **Closure** - Very importantly, we brought closure to the retreat by having a product and clear ideas at the conclusion.

### Models

Several models for academic support for digital scholarship emerged from the retreat. One was a center for digital scholarship. It was envisioned as a support service that would facilitate digital scholarship; assist with project planning, grant writing, and metadata; provide a place to do digital scholarship; create a registry and tools; promote best practices; and organize digital fairs and other information sharing venues. The center would be both physical and virtual, and would most probably be housed and hosted in the Libraries. The vision for the center was a natural extension and evolution of the work that the Libraries has already been doing and fits within our mission.

A second model proposed was an Institute for Digital Scholarship, that would address research and teaching about digital scholarship. This model was the most controversial idea that emerged -- not all scholars agreed that digital scholarship was more than a new way of doing their work. The details of this model and the debate over its importance are a story for another day.

Further conversation, input, and planning is continuing on these models. In the meantime, the Libraries is moving ahead on some tangible outcomes and ideas emanating from the retreat, such as hosting seminars to share vision, challenges, tools, and results with our staff and the rest of the UW community, and seeking funding for testing the center model.<sup>5</sup>



## Conclusion

Digital scholarship may one day supplant or at the very least grow as important as traditional scholarship. By supporting the new wave of research and scholarship librarians carve out a hefty agenda for themselves, but by doing so we may also be supporting change in scholarly communication. No one has all the answers on how to do this or knows how these strategies will play out over time, but the decision to support emerging forms of scholarship is one that we must make or we risk losing this scholarship altogether, either by having it uncollected and unsupported, or by losing it to the commercial publishers who will exercise their control over this new scholarship and sell it back to libraries at ever increasing prices.

This presentation has described the convergence of multiple activities that center around scholarship and scholarly communication. The future of libraries and of scholarship are bound together in these new endeavors and libraries have no choice but to take the lead in new models of support, whatever form they should take. If we don't, libraries will betray our missions, our scholars, our institutions, and ultimately will lose the battle in the fight to keep scholarship with the scholars.

Acquisitions and collections librarians, with their long and successful history of collaboration and working with scholars and publishers, are well positioned to begin experimenting with supporting new kinds of scholarship. They are encouraged to step up to the challenge and lend their expertise to the exploration of this new territory.

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## Notes

<sup>1</sup> The topic of digital scholarship and its place in the academy has been covered



in depth in three recent publications: Smith, Abby. *New-Model Scholarship: How Will it Survive*. Washington DC: Council of Library and Information Resources, 2003. (<http://www.clir.org/pubs/reports/pub114/pub114.pdf>). Unsworth, John M. The Crisis in Scholarly Publishing in the Humanities. *ARL Bimonthly Report*, no. 228 (June 2003): 1-4. (<http://www.arl.org/newsltr/228/crisis.html>). Andersen, Deborah Lines, ed. *Digital Scholarship in the Tenure, Promotion, and Review Process*. Armonk, NY: M.E. Sharpe, 2004.

<sup>2</sup> <http://www.iath.virginia.edu/>

<sup>3</sup> <http://www.escholarship.cdlib.org/>

<sup>4</sup> <http://politicalweb.info/home.html>

<sup>5</sup> Information about the retreat can be found at the UW Libraries site devoted to Digital Scholarship: <http://www.lib.washington.edu/digitalscholar/>. The Libraries scholarly communication web site is located at:

<http://www.lib.washinaton.edu/ScholComm/>